IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Howard G. Page   Confirmation No.: 8911

Application No.: 09/498,515   Group No.: 3622

Filed: 02/04/2000   Examiner: Yehdega Retta

For: ADVERTISING INSERTION FOR A VIDEO-ON-DEMAND SYSTEM

Mail Stop: Appeal Brief - Patents
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APPEAL BRIEF

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Introductory Comments

        Pursuant to the provisions of 37 C.F.R. § 41.30 *et seq.*, Appellant hereby appeals
to the Board of Patent Appeals and Interferences (hereinafter "the Board") from the claim
rejections issued in the Final Office Action dated July 19, 2010 (hereinafter "the Final
Office Action"). A notice of appeal was filed on October 19, 2010.

Real Party In Interest

The real party in interest is the Assignee of the present application, Sprint Communications Company L.P.

Related Appeals and Interferences

This application was previously appealed in conjunction with a Notice of Appeal filed on March 7, 2006. The Examiner's rejection was affirmed by a Board decision in Appeal 2007-1333 on November 6, 2007. The claims were amended in response to this Board decision. A Notice of Appeal was also filed on September 29, 2009. This Notice of Appeal led to a Panel Decision from Pre-Appeal Brief Review, dated November 18, 2009, which indicates the application is allowable. However, the Examiner later reopened prosecution based on a new reference.

Status of Claims

Claims 1, 5, 7, 8, 10-12, 17, 18, 20, and 21 are pending in the application.

Claims 1, 5, 7, 8, 10-12, 17, 18, 20, and 21 have been finally rejected.

Claims 1, 5, 7, 8, 10-12, 17, 18, 20, and 21 are being appealed.

Claims 2-4, 6, 9, 13-16, 19, and 22-27 were canceled in previous responses.

Claims 1-27 in the original application were canceled in response the Board decision referenced above. New claims were added and the new claims have been renumbered. All claim numbers in the claim status statements above and all claim numbers referenced elsewhere in this Appeal Brief refer to the renumbered claims.

Status of Amendments

No claim amendments have been filed subsequent to the Final Office Action.

Summary of Claimed Subject Matter

Independent claim 1 provides a method for providing video advertising. (Page 2, lines 14-16). In the method, a video-on-demand system receives a request from a target viewer for selected video content, and in response, transfers the selected video content in a video stream to the target viewer. (Page 4, lines 19-24). The method comprises selecting video advertising that has a subject matter which is related to the selected video content requested by the target viewer. (Page 4, lines 25-27; Page 6, lines 12-14, Page 7, lines 13-20). The method further comprises determining an insertion point in the selected video content for the selected video advertising, wherein the insertion point comprises data indicating where in the selected video content the selected video advertising is to be inserted. (Page 6, lines 14-16; Fig. 3). The method further comprises transferring the selected video content to a target viewer device over a first transport system and transferring the selected video advertising to the target viewer device over a second transport system. (Page 6, lines 9-11 and 19-20; Fig. 2, references 202 and 204). The first transport system uses greater bandwidth for video transfer than the second transport system. (Page 5, lines 28-29). The method further comprises transferring the insertion point to the target viewer device over the second transport system. (Page 6, lines 16-18). The method further comprises storing the selected video advertising in video storage of the target viewer device. (Page 6, lines 19-20; Fig. 2, reference 214). The method further comprises transferring the selected video content in the video stream from the target viewer device to a display device. (Page 6, lines 25-27; Fig. 1, reference 121; Fig. 2, reference 221). The method further comprises interrupting the transferring of the selected video content in the video stream at the insertion point, retrieving the selected video advertising from the video storage, and inserting the selected video advertising into the video stream. (Page 6, line 27, through page 7, line 2). The method further comprises resuming the transferring of the selected video content in the video stream at the insertion point. (Page 7, lines 2-4). The method further comprises disabling fast-forward capability when the selected video advertising is displayed. (Page 5, lines 6-7).

Independent claim 12 provides a video advertising insertion system where a video-on-demand system receives a request from a target viewer for selected video

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content, and in response, transfers the selected video content in a video stream to the target viewer. (Page 4, lines 19-24). The video advertising insertion system comprises a target viewer device comprising video storage. (Fig. 2, references 210 and 214). The video advertising system also comprises a processing system configured to select video advertising that has a subject matter relation to the selected video content requested by the target viewer. (Page 4, lines 25-27; Page 6, lines 12-14; Page 7, lines 13-20). The processing system is also configured to determine an insertion point in the selected video content for the selected video advertising. (Page 6, lines 14-16; Fig. 3). The processing system is further configured to disable fast-forward capability when the selected video advertising is displayed. (Page 5, lines 6-7). The insertion point comprises data indicating where in the selected video content the selected video advertising is to be inserted (Page 6, lines 14-16). The video advertising system further comprises a first transport system configured to transfer the selected video content to the target viewer device (Page 6, lines 9-12; Fig. 2, reference 202). The video advertising system further comprises a second transport system configured to transfer the selected video advertising and the insertion point to the target viewer device. (Page 6, lines 16-17; Fig. 2, reference 204). The first transport system uses greater bandwidth for video transfer than the second transport system. (Page 5, lines 28-29). The target viewer device stores the selected video advertising in the video storage. (Page 6, lines 19-20, Fig. 2, reference 214). The target viewer device transfers the selected video content in the video stream to a display device. (Page 6, lines 25-27; Fig. 1, reference 121; Fig. 2, reference 221). The target viewer device then interrupts the transfer of the selected video content in the video stream at the insertion point, retrieves the selected video advertising from the video storage, and inserts the selected video advertising into the video stream. (Page 6, line 27, through page 7, line 2). The target viewer device then resumes the transfer of the selected video content in the video stream at the insertion point. (Page 7, lines 2-4).

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Grounds of Rejection to be Reviewed on Appeal

1. Whether claims 1, 5, 7, 8, 10-12, 17, 18, 20, and 21 are unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 6,718,551 to Swix et al. (hereinafter "Swix") in view of U.S. Patent No. 5,822,018 to Farmer (hereinafter "Farmer") in view of U.S. Patent No. 6,698,020 to Zigmond et al. (hereinafter "Zigmond") in view of "NDS: NDS' XTV(TM) Time Shifting Technology Empowers the Viewer and the Broadcaster," M2 Presswire, September 10, 1999, (hereinafter "XTV") and further in view of U.S. Patent No. 6,588,015 to Eyer et al. (hereinafter "Eyer").

Argument

Rejection of Claims 1, 5, 7, 8, 10-12, 17, 18, 20, and 21 under 35 U.S.C. § 103(a)

Claims 1, 5, 7, 8, 10-12, 17, 18, 20, and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Swix in view of Farmer in view of Zigmond in view of XTV and further in view of Eyer. The rejection is erroneous because six of Appellant's claims are not addressed in the rejection, because the cited art is mischaracterized in at least two respects, and because the rejection relies upon improper combinations.

Unaddressed Claims

The Final Office Action lists dependent claims 7, 8, 11, 17, 18, and 21 in the summary of the rejection (page 2, last ¶). However, no discussion of the individual limitations of these claims or explanation of the rejection with respect to these claims is provided (*see* pages 2-4). This issue was raised in Appellant's filings of May 18, 2010, and September 16, 2010, but no response was provided in either the Final Office Action or the Advisory Action of September 29, 2010. The rejection is erroneous because the limitations of these claims are not addressed.

Mischaracterization of Farmer

The Final Office Action is erroneous because Farmer is mischaracterized in at least two respects. Claim 1 recites, in part, *transferring the insertion point to the target viewer device over the second transport system*. The Final Office Action concedes that Swix "failed to teach that the insertion point is transferred to the target device via the second transport system which uses less bandwidth" and asserts this limitation is found in Farmer (pg. 6, lines 4-6). However, this assertion is a mischaracterization because Farmer teaches a device which transfers cue tones to Ad-Insertion System 24 and transfers program material to a separate device, Switch 25 (Farmer, Fig. 1). Switch 25 receives program material, advertising, and timing signals over separate links but Switch 25 is not a *target viewer device*.

The Farmer target viewer devices are located in an area which exists to the right of Figure 1 entitled "to cable distribution system and subscribers." Only a single

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transport system exists between Farmer CTV System 20 and the target viewer devices. Therefore, it is not possible for Farmer to teach *transferring the insertion point to the target viewer device* **over the second transport system** as asserted in the Final Office Action because Farmer does not have a second transport system which links CTV System 20 to the target viewer devices. The Farmer timing signals and video content are combined at Switch 25 and transmitted to the target viewer devices over **a single transport system**.

The Advisory Action responds to this argument by stating "after the [Farmer] cue tones are transmitted to the Ad-Insertion System it is then transmitted to the single target device" (pg. 2, lines 7-8). This statement is also erroneous. Cue tones are transferred from Earth Station Receiver 21 to Ad-Insertion System 24 on link 23 (Farmer, fig. 1). The Farmer Ad-Insertion system receives the cue tones and generates timing signals which are sent to Switch 25 over link 34. However, there is no indication in the figures or text that the cue tones are relayed or further transmitted by the Ad-Insertion System to the target devices. The assertion in the Advisory Action is erroneous because there is no indication Farmer operates in this manner and the Advisory Action does not provide support for the assertion.

Second, the cue tones used in Farmer cannot be analogized to the *insertion points* of claim 1 because the insertion points *comprise data indicating where in the selected video content the selected video advertising is to be inserted*. The Farmer cue tones are simply signals which instruct the Ad-Insertion system to perform a specific function at the immediate time (*see* Farmer, col. 4, lines 49-51). The cue tones do not contain information indicating positions within the selected video content. The Farmer Earth Station Receiver 21 contains the information regarding the timing relationship between the cue tones and the particular locations within the video content (*see* Farmer, Fig. 1). Cue tones are simply electrical signal tones and do not themselves contain data indicating where within the selected video content advertising should be inserted. Because cue tones do not contain this type of data, it is erroneous to analogize them to *insertion points* which *comprise data indicating where in the selected video content the selected video advertising is to be inserted*.

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The Advisory Action responds to this argument by stating that Appellant's "specification does not disclose that the insertion point is not a cue tone" and concludes that "an insertion point is interpreted to mean the same as the timing signals generated by the cue tones" (pg. 2, lines 15-16 and 19-20). However, it is illogical and erroneous to conclude that Appellant's *insertion points* are the same as cue tones because Appellant did not state that they are not cue tones in the specification. **Appellant's claim describes the insertion points in a manner which inherently distinguishes them from the cue tones of Farmer**. Appellant's claim states that the insertion points *comprise data indicating where in the selected video content the selected video advertising is to be inserted*. "[C]laims must be presumed, in the absence of evidence to the contrary, to be that which applicants regard as their invention" (MPEP § 2172(I)).

The issues discussed above with respect to Farmer cannot be resolved through reference to Swix, Zigmond, XTV, or Eyer. The Notice of Panel Decision from Pre-Appeal Brief Review issued on 11/18/2009 indicates the application is allowable over Swix, Zigmond, XTV, and Eyer.

Improper Combinations

The Final Office Action relies upon at least two improper combinations. First, the Final Office Action relies on the combination of Farmer and Swix (pg. 3, line 2). The purported motivation for combining Farmer with Swix is "in order for a local program to control the insertion point of the local advertisements" (pg. 3, lines 7-8). However, this motivation would not lead to use of Farmer. In Farmer, the Ad-Insertion System and the switching and modulating functions which combine the advertising material with the program material are located in the centralized distribution equipment of the cable television system (figs. 1 and 3). The advertisements are inserted into the program material before it is transmitted to the cable distribution system (fig. 1). Therefore, **Farmer does not teach or suggest allowing "a local program to control the insertion point of the local advertisements"** as stated in the Final Office Action. Therefore, the motivation for combining Farmer stated in the Final Office Action is not taught in or supported by Farmer and would not lead one to use Farmer.

Second, the Final Office Action relies on the combination of Zigmond and Swix (pg. 3, line 17). The purported motivation for combining Zigmond with Swix is "in order to individually target the viewer or (household-by-household) as taught in Zigmond (pg. 3, line 18). However, this combination is improper for two independent reasons. First, Swix accomplishes the purported motivation without modification. Second, modifying Swix in this manner improperly defeats Swix's principle of operation.

Swix provides "a system and method for providing targeted advertisements" which "can deliver different advertisements to different viewers watching the same channel or program" (col. 3, lines 27-28, lines38-40). Therefore, the motivation for the combination provided in the Final Office Action, "to individually target the viewer or (household-by-household)," **is accomplished by Swix alone** and would provide no motivation for a combination.

In addition, even if a proper motivation for the combination was provided, the combination would be improper. In Swix, all of the activities associated with coordinating program material and advertisements are performed at the Head End by a File Server and Merge Processor (fig. 1). The viewer devices or set top boxes are not involved in these information management and control processes and simply "off-tune to the separate advertisement channel for the specified duration" when they receive a q-tone (Zigmond, col. 13, lines 24-31). The Zigmond system relies on a target viewer device in the household which stores targeted advertisements and manages the insertion process (fig. 3, references 59 and 60). Modifying Swix to move this functionality to the individual household devices as taught in Zigmond **would defeat the centralized control of these activities taught in Swix and defeat its principle of operation**. Modifying Swix with Zigmond in this manner is improper (MPEP § 2143.01(VI)).

Therefore, for at least the reasons discussed above, Appellant contends that independent claim 1 is allowable in view of the combination of Swix, Farmer, Zigmond, XTV, and Eyer, and such indication is respectfully requested.

Independent claim 12 contains limitations similar to those discussed above with respect to claim 1, and is therefore allowable over the art of record for at least the same reasons as claim 1.

Claims 5, 7, 8, 10, 11, 17, 18, 20, and 21, while separately allowable over the art of record, depend from otherwise allowable independent claims 1 and 12. Appellant therefore refrains from further discussion of these dependent claims for the sake of brevity.

Conclusion

In light of the foregoing remarks, Appellant submits that the final rejection of claims 1, 5, 7, 8, 10-12, 17, 18, 20, and 21 is erroneous, and respectfully requests its reversal.

The Office is hereby authorized to charge Deposit Account No. 21-0765 the requisite fee for this appeal brief (37 C.F.R. §§ 41.37(a)(2) and 41.20(b)(2)). The attendant notice of appeal and fee (37 C.F.R. §§ 41.61(a)(1) and 41.20(b)(1)) were filed previously on October 19, 2010. Appellant believes no additional fees are due with respect to this filing. However, should the Office determine that additional fees are necessary, the Office is hereby authorized to charge Deposit Account No. 21-0765 accordingly.

Respectfully submitted,

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Claims Appendix

The following is a list of claims involved in this appeal:

1. (PREVIOUSLY PRESENTED) A method for providing video advertising where a video-on-demand system receives a request from a target viewer for selected video content, and in response, transfers the selected video content in a video stream to the target viewer, the method comprising:

      selecting video advertising that has a subject matter relation to the selected video content requested by the target viewer;

      determining an insertion point in the selected video content for the selected video advertising, wherein the insertion point comprises data indicating where in the selected video content the selected video advertising is to be inserted;

      transferring the selected video content to a target viewer device over a first transport system and transferring the selected video advertising to the target viewer device over a second transport system, wherein the first transport system uses greater bandwidth for video transfer than the second transport system;

      transferring the insertion point to the target viewer device over the second transport system;

      storing the selected video advertising in video storage of the target viewer device;

      transferring the selected video content in the video stream from the target viewer device to a display device;

      interrupting the transferring of the selected video content in the video stream at the insertion point;

      retrieving the selected video advertising from the video storage;

      inserting the selected video advertising into the video stream;

      resuming the transferring of the selected video content in the video stream at the insertion point; and

      disabling fast-forward capability when the selected video advertising is displayed.

2-4. (CANCELED)

5. (PREVIOUSLY PRESENTED) The method of claim 1 further comprising selecting the selected video advertising based on a viewer profile for the target viewer.

6. (CANCELED)

7. (PREVIOUSLY PRESENTED) The method of claim 1 further comprising caching the video advertising using the video storage of the target viewer device.

8. (PREVIOUSLY PRESENTED) The method of claim 1 further comprising displaying the selected video content and the selected video advertising to the target viewer.

9. (CANCELED)

10. (ORIGINAL) The method of claim 1 further comprising re-displaying the selected video advertising after rewinding the selected video content.

11. (PREVIOUSLY PRESENTED) The method of claim 1 further comprising receiving the request from the target viewer for the selected video content, and in response, transferring the selected video content in the video stream to the target viewer device.

12. (PREVIOUSLY PRESENTED) A video advertising insertion system where a video-on-demand system receives a request from a target viewer for selected video content, and in response, transfers the selected video content in a video stream to the target viewer, the video advertising insertion system comprising:

a target viewer device comprising video storage;

a processing system configured to select video advertising that has a subject matter relation to the selected video content requested by the target viewer, to determine an insertion point in the selected video content for the selected video advertising, and to disable fast-forward capability when the selected video advertising is displayed, wherein the insertion point comprises data indicating where in the selected video content the selected video advertising is to be inserted;

a first transport system configured to transfer the selected video content to the target viewer device; and

a second transport system configured to transfer the selected video advertising and the insertion point to the target viewer device, wherein the first transport system uses greater bandwidth for video transfer than the second transport system;

wherein the target viewer device is configured to store the selected video advertising in the video storage, transfer the selected video content in the video stream to a display device, interrupt the transfer of the selected video content in the video stream at the insertion point, retrieve the selected video advertising from the video storage, insert the selected video advertising into the video stream, and resume the transferring of the selected video content in the video stream at the insertion point.

13-16. (CANCELED)

17. (PREVIOUSLY PRESENTED) The video advertising insertion system of claim 16 wherein the video storage is configured to cache the selected video advertising.

18. (PREVIOUSLY PRESENTED) The video advertising insertion system of claim 12 further comprising the display device.

19. (CANCELED)

20. (PREVIOUSLY PRESENTED) The video advertising insertion system of claim 12 wherein the processing system and the target viewer device are configured to re-display the selected video advertising after rewinding the selected video content.

21. (PREVIOUSLY PRESENTED) The video advertising insertion system of claim 12 further comprising the video-on-demand system configured to receive the request from the target viewer for the selected video content, and in response, transfer the selected video content in the video stream to the target viewer device.

22-27. (CANCELED)

Evidence Appendix

None

Related Proceedings Appendix

      The November 6, 2007, decision of the Board is included in the pages which follow.

1   The opinion in support of the decision being entered today is *not* binding precedent
2   of the Board.

4   UNITED STATES PATENT AND TRADEMARK OFFICE

7   BEFORE THE BOARD OF PATENT APPEALS
8   AND INTERFERENCES

11   *Ex parte* HOWARD G. PAGE, MIKE O'BRIEN, and JAY CEE STRALEY

14   Appeal 2007-1333
15   Application 09/498,515
16   Technology Center 3600

                                                            NOV 1 4 2007

19   Decided: November 6, 2007

22   Before FRED E. McKELVEY, *Senior Administrative Patent Judge*, and
23   LINDA E. HORNER and ANTON W. FETTING, *Administrative Patent Judges*.

24   FETTING, *Administrative Patent Judge*.

25   DECISION ON APPEAL

28   STATEMENT OF CASE

29   Howard G. Page, Mike O'Brien, and Jay Cee Straley (Appellants) seek

30   review under 35 U.S.C. § 134(a) of a final rejection of claims 1, 2, 5-8, 10-13,

31   16-18, 20-23, and 25-27[1], the only claims pending in the application on appeal.

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[1] Claims 3, 4, 14, and 15, rejected in the Final Rejection, were subsequently
cancelled in the Appellants' Jan. 5, 2006 amendment, entered by the Examiner on
Feb. 6, 2006.

1   We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b) (2002).

2

3   We AFFIRM and DESIGNATE OUR AFFIRMANCE AS A NEW

4   REJECTION.

5   The Appellants invented a video advertising system that selects and inserts

6   video advertising into the video content of a video-on-demand system.

7   (Specification 2:14-16). The invention selects video advertising for individual

8   target viewers based on their viewer profile and their video content selection

9   (Specification 3:13-15). The video advertising insertion system (1) receives a

10   video stream carrying selected video content from a video-on-demand system,

11   (2) selects and inserts video advertising into the video stream, and (3) transfers the

12   video stream carrying both the selected video content and the selected video

13   advertising for display to a target viewer. (Specification 3:18-23).

14   An understanding of the invention can be derived from a reading of

15   exemplary claim 1, which is reproduced below [bracketed matter and some

16   paragraphing added].

17   1. A method for providing video advertising where a video-on-
18   demand system receives a request from a target viewer for selected
19   video content, and in response, transfers the selected video content in
20   a video stream to the target viewer, the method comprising:

21   [1] selecting video advertising that has a subject matter relation to the
22   selected video content requested by the target viewer;

23   [2] inserting the selected video advertising into the video stream that
24   transfers the selected video content to the target viewer;

25   [3] transferring the selected video content to the target viewer over a
26   first transport system and

27   [4] transferring the selected video advertising to the target viewer over
28   a second transport system,

1   [5] wherein the first transport system uses greater bandwidth for video
2   transfer than the second transport system; and

3   [6] disabling fast-forward capability when the selected video
4   advertising is displayed.

5   This appeal arises from the Examiner's Final Rejection, mailed November 8,

6 2005. The Appellants filed an Appeal Brief in support of the appeal on March 7,

7 2006, and an Examiner's Answer to the Appeal Brief was mailed on June 6, 2006.

8 A Reply Brief was filed on July 31, 2006.

9

10   PRIOR ART

11   The Examiner relies upon the following prior art:

12 Eyer   US 6,588,015 B1   Jul. 01, 2003
13   (filed Jan. 14, 1998)

14 Swix   US 6,718,551 B1   Apr. 06, 2004
15   (filed Dec. 21, 1999)

16 NDS: NDS' XTV™ *Time Shifting Technology Empowers the Viewer and*
17 *the Broadcaster,* M2 Presswire (Sep. 10, 1999) (XTV).
18
19 In addition, in this opinion we discuss the following prior art:

20 Digital Audio-Visual Council, *DAVIC 1.2 Specification Part 4, Delivery*
21 *System Architecture and Interfaces* (1997[2]) (DAVIC).
22

23   REJECTION

24   Claims 1, 2, 5-8, 10-13, 16-18, 20-23, and 25-27 stand rejected under 35

25 U.S.C. § 103(a) as unpatentable over the combined disclosures of Swix, Eyer and

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[2] http://www.davic.org/Download/Spec1_2/part04.pdf
The complete specifications are available at http://www.davic.org/.

1   XTV.

2   ISSUES

3   The Examiner found that Swix teaches (1) selecting video advertising that
4   has a subject matter relation to the selected video content requested by the target
5   viewer; (2) inserting the selected video advertising into the video stream that
6   transfers the selected video content to the target viewer; (3) caching the video
7   advertising using a user device, and (4) displaying the video advertising and the
8   selected video content to the viewer interface (Answer 3). The Examiner further
9   found that Swix teaches transferring the video content over a first transport system
10   (channel) and the advertising over a second transport system (channel) (*Id.*).

11   The Examiner determined a difference exists between Swix and the claimed
12   subject matter: Swix does not teach disabling fast-forward capability when the
13   selected video advertising is displayed (*Id.*).

14   To overcome any difference, the Examiner still further found that XTV
15   teaches a set-top-box which provides advertisers with the ability to totally prevent
16   viewers from skipping ads, although XTV does not indicate how ads are skipped.
17   The Examiner also found that Eyer teaches that it is possible to force a subscriber
18   to listen to certain commercials by disabling the ability to FAST FORWARD or
19   SKIP FORWARD (*Id.*).

20   We understand the Examiner to have found that XTV's description of
21   preventing skipping suggests disabling whatever would otherwise have enabled
22   such ad skipping and concluded that it would have been obvious to one of ordinary
23   skill in the art at the time of the invention to disable the ability of fast forward or
24   skip forward in order to force the subscriber to view the commercials.

1   The Examiner further found that Eyer suggests disabling the fast forward or

2   skip forward function of the set-top box of Swix, to provide the advantage of

3   preventing the ad skipping function, taught in XTV (Answer 3-4).

4   The Appellants contend that Swix does not teach or suggest first and second

5   transport systems (Appeal Br. 4). The Appellants also contend that Swix discloses

6   one transport system (i.e., the head end **110**) that utilizes one or more channels

7   (*Id.*). Based on these contentions, the Appellants conclude that because Swix

8   describes only a single system, it describes only a single source of the video

9   (Appeal Br. 4-5).

10   The Appellants also contend that Swix does not teach a first transport system

11   that uses greater bandwidth for video transfer than a second transfer system, and

12   Swix does not discuss the bandwidth capacities of the channels of the broadcast

13   server (Appeal Br. 5). Instead, Swix discloses a bandwidth savings achieved by

14   using a single channel for delivering all video advertisements for all viewer

15   demographic groups (*Id.*).

16   Thus, the issue pertinent to this appeal is whether the Appellants have

17   sustained their burden of showing that the Examiner erred in rejecting claims 1, 2,

18   5-8, 10-13, 16-18, 20-23, and 25-27 under 35 U.S.C. § 103(a) as unpatentable over

19   Swix, Eyer and XTV.

20   The pertinent issue turns on whether Swix describes or suggests two

21   transport systems where one has a higher bandwidth than the other.

22

1	FINDING OF FACT
2	The following enumerated Findings of Fact (FF) are believed to be
3	supported by a preponderance of the evidence.

4   *Claim Construction*

5   01.   The Specification does not define the word "transport" or the phrase
6   "transport system."

7   02.   The usual and customary meaning of "transport" is to carry from one
8   place to another; convey[3].

9   03.   Thus, the usual and customary meaning of a transport system is a
10   system to carry from one place to another.

11   *Swix*

12   04.   Swix is directed toward providing targeted advertisements to specific
13   consumers (Swix, col. 1, ll. 15-18).

14   05.   Swix provides targeted advertisements over a networked media
15   delivery system by tracking and storing viewing events (e.g., such as
16   menu choices or changes in programming), analyzing the events, and
17   delivering targeted advertisements that appeal to the particular
18   subscriber generating the events. By collecting data on viewing habits
19   and analyzing that data in light of other subscriber account information
20   (from other subscriber databases), Swix is able to intelligently select and
21   display advertisements that offer products or services a viewer is truly
22   interested in purchasing. Further, Swix can deliver different

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[3] *The American Heritage Dictionary of the English Language* (4th ed. 2000).

1   advertisements to different viewers watching the same program or

2   channel (Swix, col. 3, ll. 27-47).

3   06.   The primary components of Swix "include a merge processor 100, a

4   file server 102, a profile processor 104, and a broadcast server 105,

5   connected to a plurality of set-top boxes 108. Together, these

6   components record network use by individual subscribers, store and

7   organize data associated with the network use, analyze the data to

8   identify interests of an individual subscriber, classify the individual

9   subscriber in a demographic group, and deliver an advertisement

10   targeted for her demographic group to the individual subscriber. Merge

11   processor 100, file server 102, and broadcast server 105 reside in a head

12   end 110, typically operated by a media service provider, and are

13   connected to a plurality of set-top boxes 108 through a distributed media

14   delivery network 106, such as a satellite, cable, or fiberoptic network."

15   (Swix, col. 3, l. 65 – col. 4, l. 11.)

16   07.   "File server 102 stores display data to be delivered to the plurality of

17   set-top boxes in response to a subscriber selection. … In addition to

18   storing and delivering display data, file server 102 also communicates

19   with the plurality of set-top boxes, performing such functions as

20   assigning each set-top box a demographic group and directing each

21   set-top box to tune to particular channels." (Swix, col. 4, ll. 39-57.)

22   08.   "In contrast to the interactive sessions of file server 102, broadcast

23   server 105 delivers a continuous stream of display data within a

24   broadcast environment. Broadcast server 105 delivers multiple video

25   streams on separate channels and, unlike file server 102, does not

1 participate in dynamic interchange with the set-top boxes. Instead, the
2 set-top boxes tune to the particular channels that contain programming
3 corresponding to their individual demographic groups." (Swix, col. 4,
4 ll. 58-65.)

5 09. "Profile processor 104 receives event data from merge processor 100
6 and additional data from several other sources to construct a consumer
7 profile of a subscriber. In constructing a profile, profile processor 104
8 analyzes the data to identify a subscriber's viewing habits and
9 corresponding interests.… Once the analysis is complete, profile
10 processor 104 instructs file server 102 to deliver a particular
11 advertisement to the set-top box of the viewer. Profile processor 104
12 performs data source analyses and issues instructions concurrently
13 among multiple viewers so that multiple viewers watching the same
14 show can receive different advertisements." (Swix, col. 4, l. 66 – col. 5,
15 l. 21.)

16 10. "Accordingly, it is an object of Swix to provide a system and method
17 for delivering targeted advertisements to the types of consumers most
18 likely to purchase the advertised product or service. It is another object
19 of Swix to provide targeted advertising that reaches a large audience,
20 that monitors and assesses each viewer of that audience to determine
21 purchasing interests, and that displays advertisements to each viewer
22 corresponding to her purchasing interests. … It is another object of
23 Swix to provide a means for displaying different commercials to
24 individual viewers watching the same channel." (Swix, col. 5, ll. 29-49.)

11. Swix, Fig. 5 illustrates a schematic diagram of the method by which
the set-top boxes switch from the programming streams to the
advertisement insertion streams. "Program broadcast 500 is a
continuous broadcast running on a particular quadrature amplitude
modulation (QAM) channel in a particular program identification (PID).
In FIG. 1, broadcast server 105 delivers this program broadcast 500. The
continuous broadcast indicates the beginning of an advertisement
insertion slot with a signal in the broadcast transmission, known as a
q-tone 502. Ad 1 in program 500 would be, for example, a national
advertisement that is not targeted. In contrast, Ad A, Ad B, and Ad C
would be targeted local advertisements running on broadcasts 510, 512
and 514, respectively. Program broadcast 500 and broadcasts 510, 512,
and 514 would each have different PIDs [program identifications].
(Swix, col. 13, ll. 11-23.)

12. "Thus, at q-tone 502, head end 110 communicates to each set-top box
two items of tuning information. Knowing the customer profile or
demographic group of the subscribers, head end 110 tells each set-top
box 1) which PID to tune to, and 2) for how long, i.e., the duration of the
advertisement insertion slot. Accordingly, the set-top boxes off-tune to
the separate advertisement channel for the specified duration and tune
back to program broadcast 500 after the advertisement insertion slot to
resume watching the continuous broadcast program. In this manner, two
subscribers watching the same program broadcast 500 can receive two
different advertisements appealing to their individual tastes and viewing
habits." (Swix, col. 13, ll. 24-36.)

1   13.   "The separate advertisement channel in Swix can be either another

2   programming channel whose advertisement insertion slots coincide with

3   program broadcast 500 or can be a continuous stream of advertisements

4   with no programming. The continuous stream of advertisements is

5   preferred if the intervals of the advertisements line up with the

6   programming channels that switch to it. In FIG. 5, channel 516

7   represents a continuous stream of advertisements to which program

8   broadcast 500 can off-tune, e.g., to off-tune to Ad X for advertisement

9   insertion slot 2. Optionally, instead of tuning to video advertisements, a

10   set-top box could retrieve bit map advertisements spooled in a broadcast

11   carousel format." (Swix, col. 13, ll. 37-48.)

12   14.   "The advantage of off-tuning the set-top box is a savings in

13   bandwidth. Instead of delivering a separate video stream with targeted

14   advertisements to each demographic group of subscribers, the off-tuning

15   uses only one continuous broadcasting channel and tunes to other

16   channels to deliver targeted advertisements." (Swix, col. 13, ll. 49-54.)

17   15.   Thus, Swix describes the following, undisputed by the Appellants:

18   a. selecting video advertising that has a subject matter relation to the

19   selected video content requested by the target viewer;

20   b. inserting the selected video advertising into the video stream that

21   transfers the selected video content to the target viewer; caching

22   the video advertising using a user device;

23   c. displaying the video advertising and the selected video content to

24   the viewer interface; and

1   d.   transferring the video content over a first channel and the

2   advertising over a second channel.

3   *Eyer*

4   16.   Eyer is directed toward for providing a broadcast digital radio service

5   in which the user is afforded various interactive features (Eyer, col. 1,

6   ll. 6-8).

7   17.   For marketing purposes, Eyer provides "a plurality of service tiers,

8   e.g., a free or basic service level, and one or more premium (subscriber)

9   levels. For example, a free service level would have a number of

10   commercials for each hour of music or other programming, while a mid

11   level premium service has fewer commercials, and a high level premium

12   service has no commercials. This can be achieved by providing only the

13   paying customers with data which indicates access points for the

14   program segments. The access points allow a user to skip forward or

15   backward to a program segment which is stored in the buffer after the

16   user has begun to play a current program segment. In this manner, some

17   users can skip over at least some of the commercial segments, while

18   others cannot skip over the commercial segments. Moreover, for the

19   mid and high levels, the commercials may be skipped automatically or at

20   the user's discretion." (Eyer, col. 2, ll. 44-60.)

21   *XTV*

22   18.   XTV is an article about time shifting digital storage technology. It

23   describes a set top box, referred to as XTV, that has the capacity to

24   prevent ad skipping.

PRINCIPLES OF LAW

Claim Construction

During examination of a patent application, pending claims are given their broadest reasonable construction consistent with the specification. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969); *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364, 70 USPQ2d 1827, 1834 (Fed. Cir. 2004).

Although a patent applicant is entitled to be his or her own lexicographer of patent claim terms, in *ex parte* prosecution it must be within limits. *In re Corr*, 347 F.2d 578, 580, 146 USPQ 69, 70 (CCPA 1965). The applicant must do so by placing such definitions in the Specification with sufficient clarity to provide a person of ordinary skill in the art with clear and precise notice of the meaning that is to be construed. *See also In re Paulsen*, 30 F.3d 1475, 1480, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994) (although an inventor is free to define the specific terms used to describe the invention, this must be done with reasonable clarity, deliberateness, and precision; where an inventor chooses to give terms uncommon meanings, the inventor must set out any uncommon definition in some manner within the patent disclosure so as to give one of ordinary skill in the art notice of the change).

Obviousness

A claimed invention is unpatentable if the differences between it and the prior art are "such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35

1   U.S.C. § 103(a) (2000); *KSR Int'l v. Teleflex Inc.*, 127 S.Ct. 1727, 82 USPQ2d

2   1385 (2007); *Graham v. John Deere Co.*, 383 U.S. 1, 13-14, 148 USPQ 459, 465

3   (1966).

4   In *Graham*, the Court held that that the obviousness analysis is bottomed on

5   several basic factual inquiries: "[(1)] the scope and content of the prior art are to be

6   determined; [(2)] differences between the prior art and the claims at issue are to be

7   ascertained; and [(3)] the level of ordinary skill in the pertinent art resolved." 383

8   U.S. at 17, 148 USPQ at 467. *See also KSR Int'l v. Teleflex Inc.*, 127 S.Ct. at 1734

9   82 USPQ2d at 1391. "The combination of familiar elements according to known

10   methods is likely to be obvious when it does no more than yield predictable

11   results." *KSR*, at 1739, 82 USPQ2d at 1396.

12   "When a work is available in one field of endeavor, design incentives and

13   other market forces can prompt variations of it, either in the same field or in a

14   different one. If a person of ordinary skill in the art can implement a predictable

15   variation, § 103 likely bars its patentability." *Id.* at 1740, 82 USPQ2d at 1396.

16   "For the same reason, if a technique has been used to improve one device,

17   and a person of ordinary skill in the art would recognize that it would improve

18   similar devices in the same way, using the technique is obvious unless its actual

19   application is beyond his or her skill." *Id.*

20   "Under the correct analysis, any need or problem known in the field of

21   endeavor at the time of invention and addressed by the patent can provide a reason

22   for combining the elements in the manner claimed." *Id.* at 1742, 82 USPQ2d at

23   1397.

24

ANALYSIS

Claims 1, 2, 5-8, 10-13, 16-18, 20-23, and 25-27 rejected under 35 U.S.C. § 103(a)
as obvious over Swix, Eyer, and XTV.

The Appellants argue these claims as a group.

Accordingly, we select claim 1 as representative of the group. 37 C.F.R.
§ 41.37(c)(1)(vii) (2006).

Claim 1 is directed toward (1) selecting ads of interest to a viewer,
(2) transferring one video stream over a first transport system and an advertising
video stream over a second transport system that uses lower bandwidth than the
first transport system, (3) inserting the advertising stream into the first video
stream, and (4) disabling fast-forward of the advertising. The Eyer and XTV
references show the disabling of fast-forward, and this is not in dispute, although
the Appellants question the relevance of XTV (Appeal Br. 4).

The remaining claimed subject matter, except for the presence of two
transport systems and their difference in bandwidth, is described by Swix
(FF 04-15), and this description by Swix is undisputed by the Appellants (FF 15).

Thus, the only two issues are (1) whether Swix describes two transport
systems and (2) whether the two transport systems use different bandwidths.

Swix brings its regular programming in on one channel and the advertising
in on another channel (FF 11-14). The Examiner construes the claim term
"transport system" as sufficiently broad to embrace a channel. The term "channel"
has many definitions, but the one most pertinent to video signal propagation is "a
specified frequency band for the transmission and reception of electromagnetic
signals, as for television signals."[3] A transport system is a system to carry from

14

1   one place to another (FF 02). Clearly, to transmit a signal at a particular

2   frequency, there must be circuitry to transmit and receive at that frequency. Such a

3   collection of circuitry must operate in a coherent fashion to propagate and receive

4   the signal successfully, such transmission and reception systemically carries the

5   signal from one place to another. Thus, such circuitry for a given frequency must

6   constitute a transport system.

7   Swix carries two video streams across two different channels at two different

8   frequencies. Thus, Swix necessarily describes two transport systems. Thus, we

9   find the Appellants' arguments unpersuasive that Swix fails to describe a first

10 transport system for the first stream and a second transport system for the second

11 stream.

12   The Examiner correctly noted that the second transport system uses less

13 bandwidth than the first. To address the different bandwidths, the Examiner in

14 effect took "official notice" of a practice of using different bandwidths for

15 advertisements as contrasted with regular video content (Answer 5). The

16 Appellants disagree with the Examiner's approach (Reply Br. 3-4).

17   Thus, an issue is whether it was notoriously well known to one of ordinary

18 skill, that advertising content, used by Swix's second transport system, would have

19 used less bandwidth than regular video, used by Swix's first transport system. *Cf.*

20 *In re Knapp-Monarch Co.*, 296 F.2d 230, 232, 132 USPQ 6, 8 (CCPA 1961); *In re*

21 *Eynde*, 480 F.2d 1364, 1370, 178 USPQ 470, 474 (CCPA 1973).

22   Any official notice issue is not pertinent to the apparatus claims 12, 13, 16-

23 18, 20, and 21, or to the product claims 22, 23, and 25-27, because these claims are

24 broader in scope than that argued by the Appellants. These claims are directed to a

25 machine and software that use different bandwidths, i.e. their structural limitation

1 is to have the capacity to accommodate streams that use different bandwidths,

2 where the higher bandwidth is the normal video stream. As structural rather than

3 procedural categories of invention, it is their structural capacity to perform recited

4 functions rather than the actual performance of such functions themselves, that

5 define the claimed subject matter. Because Swix clearly is able to accommodate

6 regular video in both channels, both of Swix's transport systems have the capacity

7 to use different bandwidths. Thus, insofar as these claims are concerned, we can

8 find no error in the Examiner's rejection.

9   As to the method claims, we decline to get into a side-show debate about

10 whether the Examiner erred in taking official notice. While we believe the fact

11 officially noticed is entirely correct, we prefer instead to cite prior art which

12 confirms the fact officially noticed. Accordingly, we enter into the record the

13 DAVIC reference, *supra*, as evidence in support of the fact officially noticed.

14   In particular, Figure 9-1 on p. 19 portrays a DAVIC enhanced broadcast

15 service in which a broadcast server transmits a unidirectional signal to the

16 customer's set top box and an interactive service provider transmits a bi-directional

17 signal to the same customer's set top box. DAVIC states that, among examples of

18 its services, are ordering advertised goods displayed during programs and selecting

19 movies in near video on demand. The broadcast signal is used to deliver actual

20 content and the interaction network is used for application control and to deliver

21 additional content information. The additional content information in DAVIC's

22 interactive signal supplements the broadcast signal, and would therefore be

23 analogous to Swix's advertising video. Since this network is for interaction, which

24 spends a considerable time waiting for content, the bandwidth generally consumed

25 would be substantially less than that for a broadcast signal that is devoted to a

16

1 unidirectional signal. Also, the necessity for bandwidth allocated to the return

2 signal in a bidirectional communication would reduce the bandwidth available for

3 the outbound signal as well. For both of these reasons, a person of ordinary skill

4 would recognize that DAVIC's outbound portion of its interaction signal would

5 use less bandwidth than DAVIC's broadcast signal.

6 Thus, we find the fact officially noticed by the Examiner of the relative

7 disparity between the bandwidth usage of Swix's video streams, further evidenced

8 by the teachings of DAVIC regarding the transmission of multiple such streams, to

9 be correct.

10 We are not persuaded that the Examiner erred in combining teachings of

11 Swix, Eyer, and XTV, along with official notice of the relative disparity of normal

12 and advertising video signals, or in holding that the combined teachings render

13 obvious the claimed subject matter. In other words, the prior art suggests doing

14 what the Appellants did. *In re Fridolph*, 134 F.2d 414, 416, 57 USPQ 122, 124

15 (CCPA 1943).

16

17 CONCLUSIONS OF LAW

18 The Appellants have not sustained their burden of showing that the

19 Examiner erred in rejecting claims 1, 2, 5-8, 10-13, 16-18, 20-23, and 25-27 under

20 35 U.S.C. § 103(a) as unpatentable over the prior art.

21 On this record, the Appellants are not entitled to a patent containing claims

22 1, 2, 5-8, 10-13, 16-18, 20-23, and 25-27.

23

1   DECISION

2   The rejection of claims 1, 2, 5-8, 10-13, 16-18, 20-23, and 25-27 under 35

3   U.S.C. § 103(a) as unpatentable over the prior art is affirmed.

4   Since we have relied on prior art not cited by the Examiner, we designate

5   our affirmance as a new rejection within the meaning of 37 C.F.R. § 41.50(b)

6   (2006).

7   Our decision is not a final agency action.

8   37 C.F.R. § 41.50(b) provides that Appellant, *WITHIN TWO MONTHS*

9   *FROM THE DATE OF THE DECISION*, must exercise one of the following two

10   options with respect to the new rejection:

11   (1) *Reopen prosecution*. Submit an appropriate amendment of
12   the claims so rejected or new evidence relating to the claims so
13   rejected, or both, and have the matter reconsidered by the Examiner,
14   in which event the proceeding will be remanded to the Examiner. . . .
15
16   (2) *Request rehearing*. Request that the proceeding be reheard
17   under § 41.52 by the Board upon the same record. . . .
18
19   No time period for taking any subsequent action in connection with this

20   appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R.

21   § 1.136(a)(1)(iv) (2006).

1   <u>AFFIRMED – 37 C.F.R. § 41.50(b)</u>

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